



Project Introduction

Robonaut 2, a crew assistant robotic prototype, will be integrated with IBM's Watson. R2 will embody the artificial intelligence to enable new levels of robotic autonomy, human robotic interaction, and trust in autonomous systems.

Anticipated Benefits

NASA Funded: Integrating IBM's Watson into Robonaut 2 is the first step in providing NASA robotics with "artificial intelligence". The collaboration will benefit NASA by enabling higher intelligence in NASA robotics, and by developing a "deep-learning" pathway for future space exploration missions.

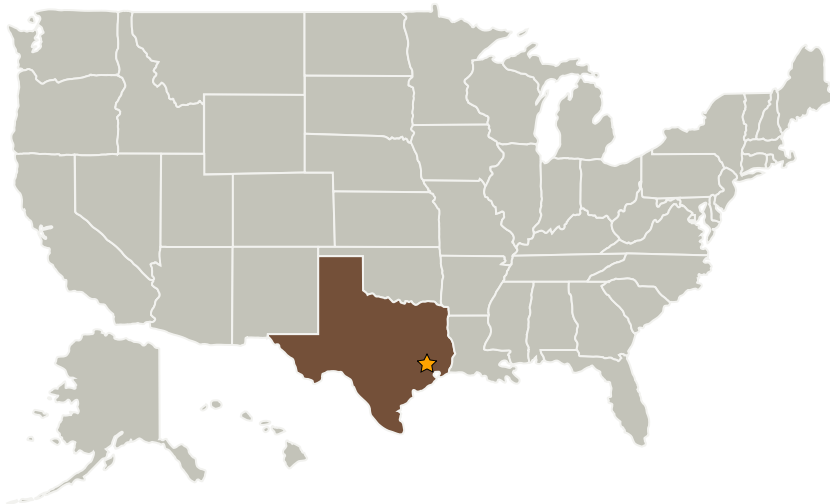
##NASA Unfunded: Once integrated into R2, Watson will have a pathway forward with other NASA prototype robots. This collaboration also offers NASA the opportunity for outside users of R2, which will only improve the functionality and usability of the robot, and all other future prototypes.

##OGA: IBM Watson seeks to embody their artificial intelligence software. This collaboration will benefit them for future robotics development projects, which in turn can benefit society as a whole.

##Industry: This item does not benefit the commercial space industry

##Nation: This item does not benefit the nation

Primary U.S. Work Locations and Key Partners



R2 Cognitive Computing

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Organizational Responsibility

Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

Lead Center / Facility:

Johnson Space Center (JSC)

Responsible Program:

Game Changing Development

R2 Cognitive Computing

Completed Technology Project (2015 - 2017)




Organizations Performing Work	Role	Type	Location
★ Johnson Space Center(JSC)	Lead Organization	NASA Center	Houston, Texas
IBM Watson Group	Supporting Organization	Industry	

Primary U.S. Work Locations

Texas

Project Transitions

 **October 2015:** Project Start **September 2017:** Closed out

Closeout Summary: The R2 Cognitive Computing Partnership integrated the power of the IBM Watson cognitive computing platform into robotic tasks to augment the natural language human-robot interaction capabilities. Woodside Energy provided funding to support this effort since it can provide a caretaker capability at remote sites. Several demonstrations were performed using R2 as a robotic testbed that showcased the potential application of this technology.

Project Management

Program Director:

Mary J Werkheiser

Program Manager:

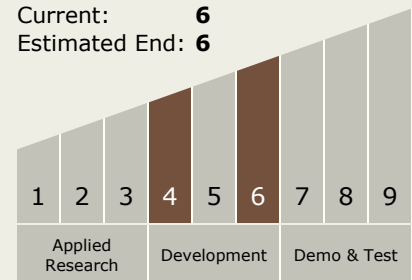
Gary F Meyering

Principal Investigator:

William J Bluethmann

Technology Maturity (TRL)

Start: 4
Current: 6
Estimated End: 6



Target Destination

Earth